System and Method for Balancing Computational Load Across a Plurality of Processors

ABSTRACT

A system and method for balancing computational load across a plurality of processors. Source code subtasks are compiled into byte code subtasks whereby the byte code subtasks are translated into processor-specific object code subtasks at runtime. The processor-type selection is based upon one of three approaches which are 1) a brute force approach, 2) higher-level approach, or 3) processor availability approach. Each object code subtask is loaded in a corresponding processor type for execution. In one embodiment, a compiler stores a pointer in a byte code file that references the location of a byte code subtask. In this embodiment, the byte code subtask is stored in a shared library and, at runtime, a runtime loader uses the pointer to identify the location of the byte code subtask in order to translate the byte code subtask.